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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/990,534	11/21/2001	David M. Baylon	GIC-635	2611
43471	7590	03/13/2006	EXAMINER	
GENERAL INSTRUMENT CORPORATION DBA THE CONNECTED HOME SOLUTIONS BUSINESS OF MOTOROLA, INC. 101 TOURNAMENT DRIVE HORSHAM, PA 19044			SENI, BEHROOZ M	
			ART UNIT	PAPER NUMBER
			2613	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/990,534

Applicant(s)

BAYLON ET AL.

Examiner

Behrooz Senfi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's arguments, see Remarks, filed 12/14/2005, with respect to the rejection(s) of claim(s) 1 - 29 under 35 U.S.C. 112, first paragraph in the last Office Action (dated, 9/30/2005) are persuasive. Therefore, the rejection has been withdrawn.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1 – 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the claim language, "selectively performing a step of encoding a subsequent video signal segment to enable decoding thereof without reference to the current segment", is unclear. Because there is only one step prescribes after "selectively performing" without providing an alternative. For example, what happens if encoding is not performed?

For the purpose of art rejection, examiner assumes that, the selection is between encoding a subsequent video signal segment and not encoding the subsequent video signal segment.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 – 9, 12 – 23, 26 - 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith et al (US 4,785,349).

Regarding claims 1 and 15, Keith '349 teaches, improving video quality delivered to a display device (i.e. col. 8, lines 1 – 4) comprising; encoding a current video signal segment to be decoded at the display device (fig. 1, encoder 16) and estimating, as part of the encoding step, a time required for decoding the video signal segment at the display device (fig. 1, abstract, lines 6 - 8), and if estimated time exceeds a predetermined decoder time period (col. 10, lines 57 – 65) selectively performing a step of, encoding a subsequent video signal segment to enable decoding thereof without reference to the current segment, which reads (col. 9, lines 63 – col. 10, lines 43). Keith '349 teaches adjusting and controlling the threshold such that the video signal can be decoded within the decoder time period. Furthermore, Keith teaches detection of the oversized frames, which in fact takes more time for decoding, and based on the detection of the oversized frame, request that the oversized frame (selected subsequent frame) to be recompressed/re-encode (i.e. col. 10, lines 29 – 40, col. 36, lines 31 – 34).

Keith is silent in regards to the claimed, if the estimated time exceeds the decoder time (threshold) repeat encoding/re-encode subsequent video signal.

However, as discussed earlier, Keith teaches, adjusting and controlling the

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threshold such that the video signal can be decoded within the decoder time.

Keith also discloses, there is no need to repeat compression in certain situation, even if it exceeds the allowed decoding time (col. 10, lines 36 – 38). Based on the citation above, repeat encoding video signal based on the desired application as claimed is involved in Keith.

Therefore, in view of the above, it would have been obvious to one skilled in the art at the time of the invention was made to encode/re-encode or not encode/re-encode the subsequent video signal if it exceeds the threshold value.

Regarding claim 2, Keith '349 teaches, wherein the step of encoding a subsequent video signal segment is selected to be performed based on the available processing time of the encoder (col. 10, lines 59 – 68).

Regarding claim 3, Keith '349 teaches, step of re-encoding of the current video signal segment such that it can be decoded within the decoder time period is performed, if the step of encoding a subsequent video signal is not selected, in claim 3, has been analyzed and rejected with respect to claim 1 above.

Regarding claims 4 and 18, Keith '349 teaches, wherein estimating step models a decoder for the display device (abstract, col. 10, lines 23 – 30).

Regarding claims 5 and 19, Keith '349 teaches, wherein model uses components of the decoder that are also present in an encoder used for the current video signal segment encoding step (col. 1, lines 48 – 65).

Regarding claim 9, Keith '349 teaches, model determines a number of compressed bits required by the current video signal (i.e. fig. 2, col. 9, lines 63 – col. 10, lines 30).

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Regarding claims 12 – 13 and 26, Keith '349 teaches, display device is a synchronous display device (i.e. fig. 1, display 36), and video signal segment is part of a streaming video data stream (abstract, lines 7 – 10).

Regarding claim 14, Keith '349 teaches, machine-readable computer, (i.e. fig. 1, computer 28).

Regarding claims 16 – 17, please see discussion with respect to claim 1 above.

Regarding claim 23, please see claim 9. also see (i.e. fig. 2, col. 9, lines 63 – col. 10, lines 30).

Regarding claim 27, the limitations claimed have been analyzed and rejected with respect to claim 1.

Regarding claim 28, Keith '349 teaches, communication path comprises streaming video server, (i.e. fig. 1).

6. Claims 10, 11, 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith et al (US 4,785,349) in view of Helman (US 6,879,723).

Regarding claim 10, Keith '349 is silent in regards to, block transform coding and monitoring a number of block skipped during the block transform coding.

However such features are well known and used in the prior art of the record, as evidenced by Helman '723 (figs 3a-3d, frame 0 – frame 3, and fig. 4b, col. 1, lines 37 – 39, col. 3, lines 54 – 557 and col. 6, lines 1 –3).

Taking the combined teaching of Keith '349 and Helman '723 as a whole,

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it would have been obvious to one skilled in the art at the time of the invention was made to modify the video compression and decompression of Keith by performing block transform coding as taught by Helman '723 to improve the image quality.

Regarding claims 11, 24 and 25 have been analyzed and rejected with respect to claim 10. Furthermore, different types of blocks providing during the block transform coding, reads on DCT processing, which provides different types of blocks (fig. 2, DCT and fig3A – 3D).

7. Claims 6 – 8 and 20 - 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keith et al (US 4,785,349) in view of Bhaumik et al (US 2003/0053543).

Regarding claims 6 and 20, Keith '349 is silent in regards to, estimating step uses existing motion estimation information obtained during the encoding step (claims 6 and 20).

However such features are well known and used in the prior art of the record, as evidenced by Bhaumik '543 (fig. 2, abstract, lines 1 – 12, page 1, sections 0004 and 0005, and page 2, section 0016).

Taking the combined teaching of Keith '349 and Bhaumik '543 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to improve digital video compression of Keith as taught by Bhaumik to enhance encoder performance without compromising the quality of the compression during motion estimation.

Regarding claims 7 – 8 and 21 – 22, combination of Keith and Bhaumik

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teaches, memory and complexity as claimed (fig. 1, element 140 of Bhaumik).

8. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keith et al (US 4,785,349) in view of Zhu (US 5,870,146).

Regarding claim 29, Keith '349 is silent in regards to, transcoder.

However such features are well known and used in the prior art of the record, as evidenced by Zhu '146 (col. 1, lines 5 – 7, col. 3, lines 65 – col. 4, lines 4).

Taking the combined teaching of Keith '349 and Zhu '146 as a whole, it would have been obvious to one skilled in the art at the time of the invention was made to modify the digital video compression and decompression of Keith by using a transcoder, which can convert the incoming rate of the bit-stream into a rate acceptable to the decoding or output end, and also can be used to change the rate of a digital video bit stream, as suggested by ZHU (col. 3, lines 9 – 12).

Contact

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Behrooz Senfi** whose telephone number is **(571) 272-7339**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Mehrdad Dastouri** can be reached on **(571) 272-7418**.

Hand-delivered responses should be brought to Randolph Building, 401 Dulany Street, Alexandria, Va. 22314.

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Any inquiry of a general nature or relative to the status of the application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is **(571) 272-6000**,

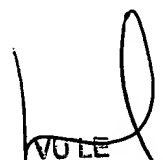
Or faxed to:

(571) 273-8300

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

B.M.S. 

3/4/2005


VOLE
PRIMARY EXAMINER